

Electronic Procedures for Medical Operations, Phase I

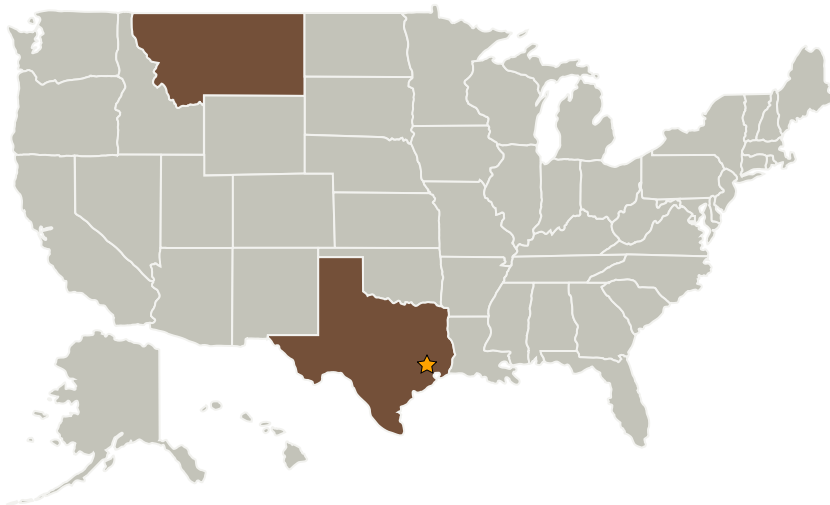
Completed Technology Project (2008 - 2008)



Project Introduction

We propose an alternative to using Microsoft Word for representing medical procedures that will make the procedures easier to construct and maintain, particularly when there are changes to the hardware or changes to the resulting format of the procedure. We call this alternative an "electronic procedure". Rather than a text-based document, this content-based document separates the text from the formatting standards and tags items contained in the procedure so that they can be recognized by other electronic systems. If a standard format changes, a reference to that format is updated. The electronic procedures can be re-converted in a single batch process, and the entire body of procedures will have the new format. Changes to hardware can be made in a similar manner, where changing a piece of hardware in a procedure will change all references to it in that procedure. Switching to this new representation offers many short and long-term benefits, which we describe herein. We have already demonstrated the use of electronic procedures for modeling ISS operational procedures (and in modeling one ISS medical procedure). We hope to extend this work into the medical operations field so we can demonstrate how medical procedures can benefit from this technology.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission
Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation
Research/Small Business Tech
Transfer

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Organizations Performing Work	Role	Type	Location
★ Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
S&K Aerospace, Inc.	Supporting Organization	Industry Small Disadvantaged Business (SDB)	St Ignatius, Montana

Primary U.S. Work Locations

Montana	Texas
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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Mary Hudson

Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
 - └ TX11.1 Software Development, Engineering, and Integrity
 - └ TX11.1.5 Architecture and Design of Software systems